

Innovation in Healthcare

Scientific discoveries and innovation has been a cornerstone of healthcare. It is the bright young minds and business concerns that bring cheap and better quality drugs and instruments into the market.

Recent innovation in the field of Healthcare has taken the usage of technology to a cost effective and reachable to the public. Recently, a mobile phone sized hemoglobin meter named as TrueHb Hemometer got productized. Approved by AIIMS, this device is aimed to identify and tackle anemia effectively. A typical CBC counter costs about RS 2-10 Lakhs, but this device is expected to be much cheaper at around Rs 25,000. It works like a conventional glucometer, and works on a tiny drop of blood.

It comes with a charger, which allows up to 300 tests per charge. This tiny invention would make Haemoglobin tests cheaper to the public. In another case, Philips India achieved a milestone by bringing new pocket sized ultrasound and ECG machines to the market, making the process more cost effective and convenience of taking it to remote locations. Such innovations are much needed in a developing country like India, where it becomes a tedious task to reach the poor people with proper healthcare facilities.

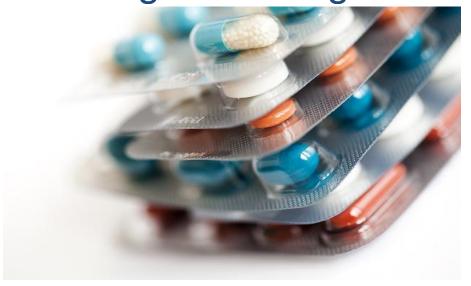


World Blood Donor Day, 14th June, 2014

"India needs 12 million units of blood, but only 9 million are collected annually"

A country needs a minimum stock of 1 % of their population. However, there have been many deaths in Indian Hospitals due to either inadequate blood or wrong transfusion. With increasing diseases and road accidents, doctors believe that the demand is actually five times more than estimated.

Astounding Cost of Inventing New Drugs



The drug industry has been ever evolving, introducing new continuously enhanced drugs into the market. This dynamic industry and the growing competition is forcing companies to invest more in Research and Development and come up with better drugs every day. The world average cost of bringing a new drug into the market has been estimated to be \$1.3 billion. A single clinical trial of a high end drug can go up to \$100 million and manufacturing cost can be 10 times as the trial cost. But the gamble here is the cost of failure. When dealing with medicines, slight variation in the percentage of a particular constituent can change the purpose of the drug. The final drug may have severe side effects, or may not perform the job as expected. Statistically, only 1 in 10 medicines that go for human clinical trials succeed. A 9 out of 10 failure accounts to a huge sunk cost for the companies. Introduction of anti-Malarial drug 'Synriam' by Ranbaxy is one such example of successful innovation after rigorous trail failures. However, one does need more than just research and testing a drug. Intellectual property rights capability for drug research, new drug delivery system, state of the art packaging systems, automation, reliability and flexibility in manufacturing are a few factors that one needs to develop top quality drugs.



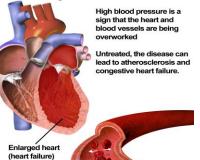
To minimize quality defects, process capabilities must be improved by changing the system of measurement from percentage to six-sigma. India has more than a million pharmacists and scientists. 75% of this force is dedicated to retailing and distribution. Around 20% is involved in R&D, manufacturing and quality control.

A few programs aimed at improving the scope of healthcare in India has been initiated by the government in the past decade. An Open Source Drug Discovery program is one such proposal. It's a CSIR led team India consortium with global partnership, introduced some time back with an aim to provide affordable healthcare to the developing countries. OSDD has more than 4500 registered users from over 100 countries. Its business model is based on open innovation in pharmaceutical research as it simultaneously carries out research in drug enhancement.

To be globally competitive, India needs courses in regulatory jurisprudence so that newer legislations are implemented and understood with uttermost importance and speed. Also, continuing education should be made a pre requisite for upcoming new pharmacists. A collaborative program with pharmaceutical industries and hospitals could help design a better education course for the students. This would ensure a good work force for the future dedicated in improving the quality of medication present in the healthcare market.

HYPERTENSION— A GROWING PROBLEM

High Blood Pressure



According to a research, nearly one billion people have Hypertension, of these two third are in developing countries. It is one of the most important causes premature deaths in India. People with Hypertension are more likely to develop complications of diabetes.